



Clean Water is Everyone's Business

A commercial & industrial property owner's guide
to improving Lake Tahoe's clarity



this informational guide will help you understand
the **tahoe regional planning agency's (trpa)**
regulations concerning the installation of
bmps on commercial and industrial
properties, which help prevent
stormwater runoff from
polluting lake tahoe.

why is lake tahoe losing its clarity?

Clarity has been on the decline since the 1960s. Much of this loss of clarity results from fine sediment particles in stormwater runoff from urban areas in the Tahoe Basin.



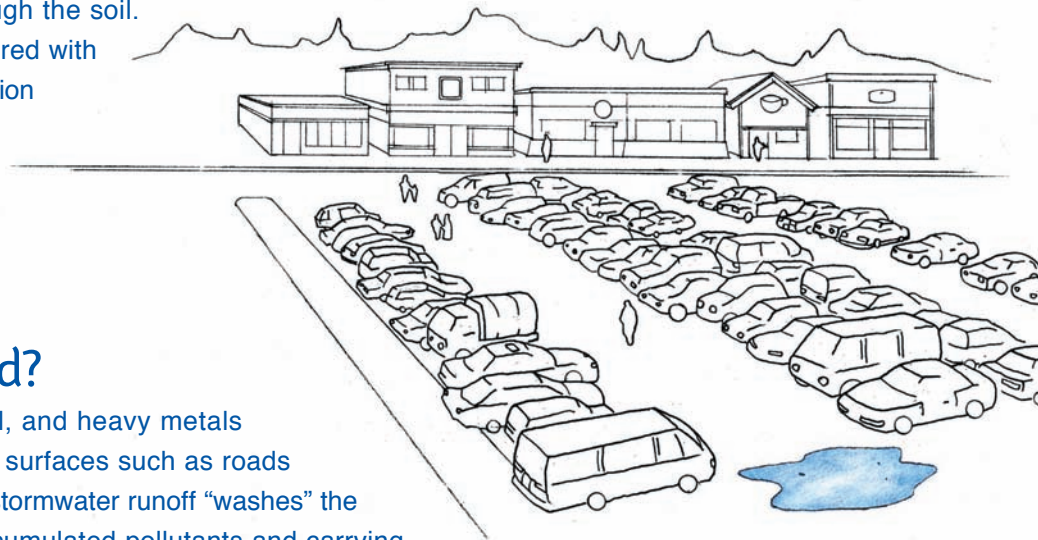
what is stormwater runoff?

In an undisturbed watershed, the majority of rain and snow melt is absorbed and filtered through the soil.

When a watershed is disturbed and covered with roads, parking lots and rooftops, precipitation can no longer be absorbed. Instead, it “runs off” the impervious surfaces, becoming stormwater runoff.

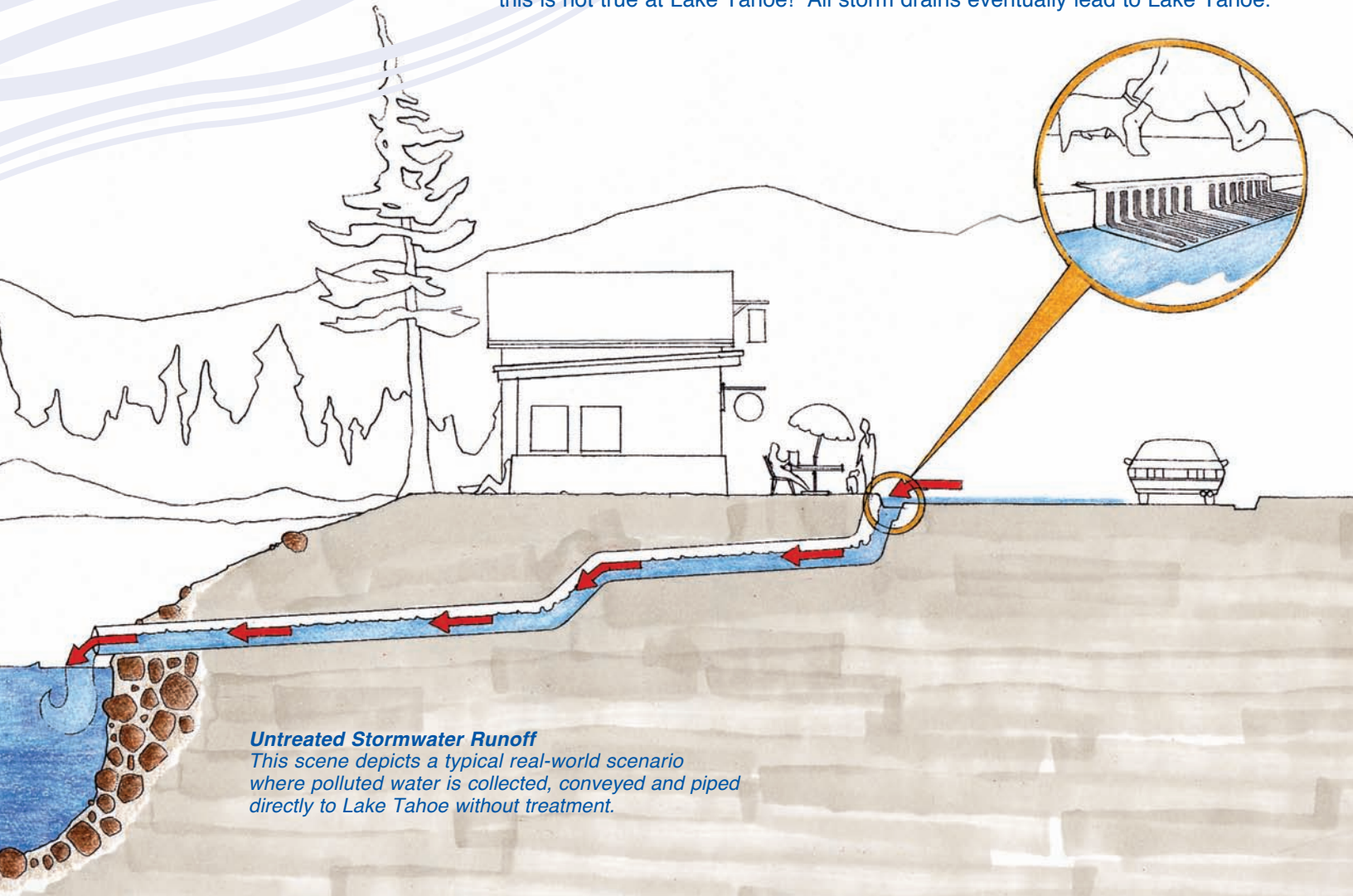
how does stormwater runoff become polluted?

Pollutants such as sediment, grease, oil, and heavy metals from vehicles accumulate on impervious surfaces such as roads and parking lots. When a storm hits, the stormwater runoff “washes” the surfaces it flows over, picking up the accumulated pollutants and carrying them to the nearest stormdrain, ditch, or stream and eventually to Lake Tahoe.



where do storm drains take stormwater runoff?

Many people mistakenly think that storm drains lead to a sanitary sewer system, where the stormwater runoff is treated. While this occurs in some communities, this is not true at Lake Tahoe! All storm drains eventually lead to Lake Tahoe.

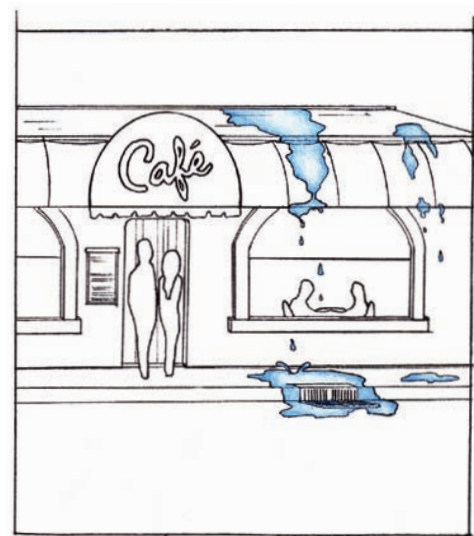
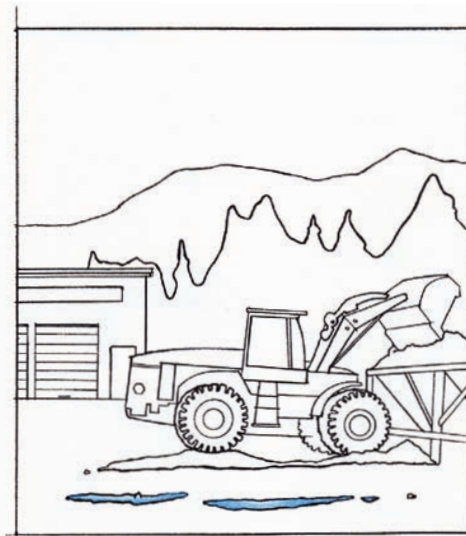
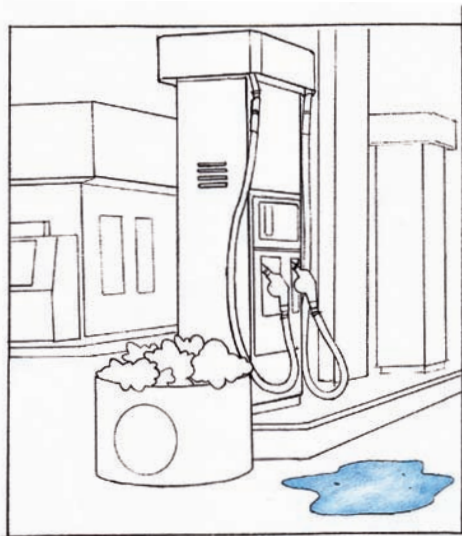


Untreated Stormwater Runoff

This scene depicts a typical real-world scenario where polluted water is collected, conveyed and piped directly to Lake Tahoe without treatment.

what can be done to prevent stormwater runoff from polluting lake tahoe?

Luckily, there are measures that can be implemented to prevent stormwater runoff from damaging the environment. These measures are called Best Management Practices, and are often referred to as BMPs. This brochure focuses on BMPs that are appropriate for commercial and industrial properties. Commercial and industrial properties include retail stores, gas stations, manufacturing plants, warehouses, office buildings, restaurants, maintenance yards, and many other types of businesses.



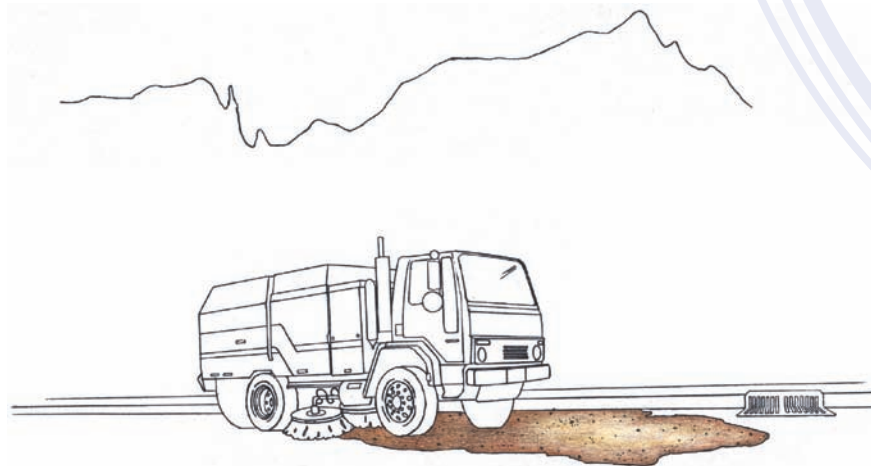
what kind of bmps do commercial & industrial properties need?

BMPs are measures that prevent stormwater runoff from damaging the environment. However, BMPs need to be specifically tailored to each individual property depending on site characteristics such as soil type, slope, and land use. For example, it is reasonable to expect that BMPs required for a gas station where there is a potential for hazardous spills would differ greatly from BMPs required for an office building. This is why a site specific BMP plan is so important.

The three crucial steps that you can take to prevent pollution in Lake Tahoe are listed below:

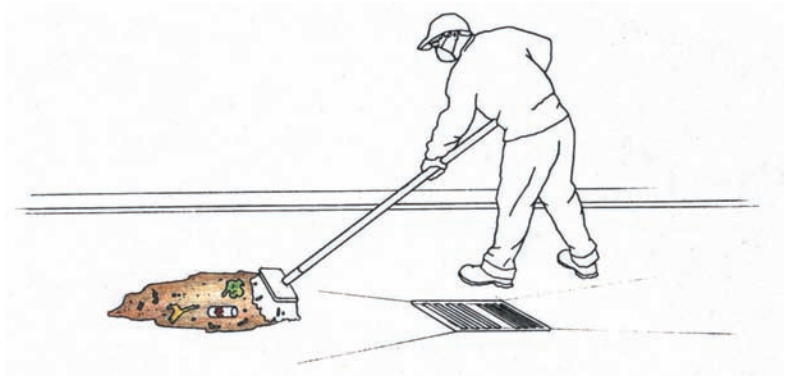
#1. Keep Your Site Clean:

- Sweep parking areas and walkways instead of washing with a hose
- Clean litter and debris from drainage inlets to prevent flooding
- Plan sand and salt operations to prevent over application
- Store snow on flat, well-vegetated areas or upslope of infiltration systems
- Create a spill prevention and response plan
 - Train employees how to prevent spills and how to respond to a spill
 - Report bigger spills to appropriate agencies for proper clean up
- Keep dumpster lids closed and trash collection areas clean
- Perform vehicle maintenance and wash only where water flows into a sand/oil separator
- Store hazardous materials in covered, protected areas



Large Scale Maintenance & Upkeep

Keeping paved surfaces clean is an important BMP to keep soil out of Lake Tahoe.

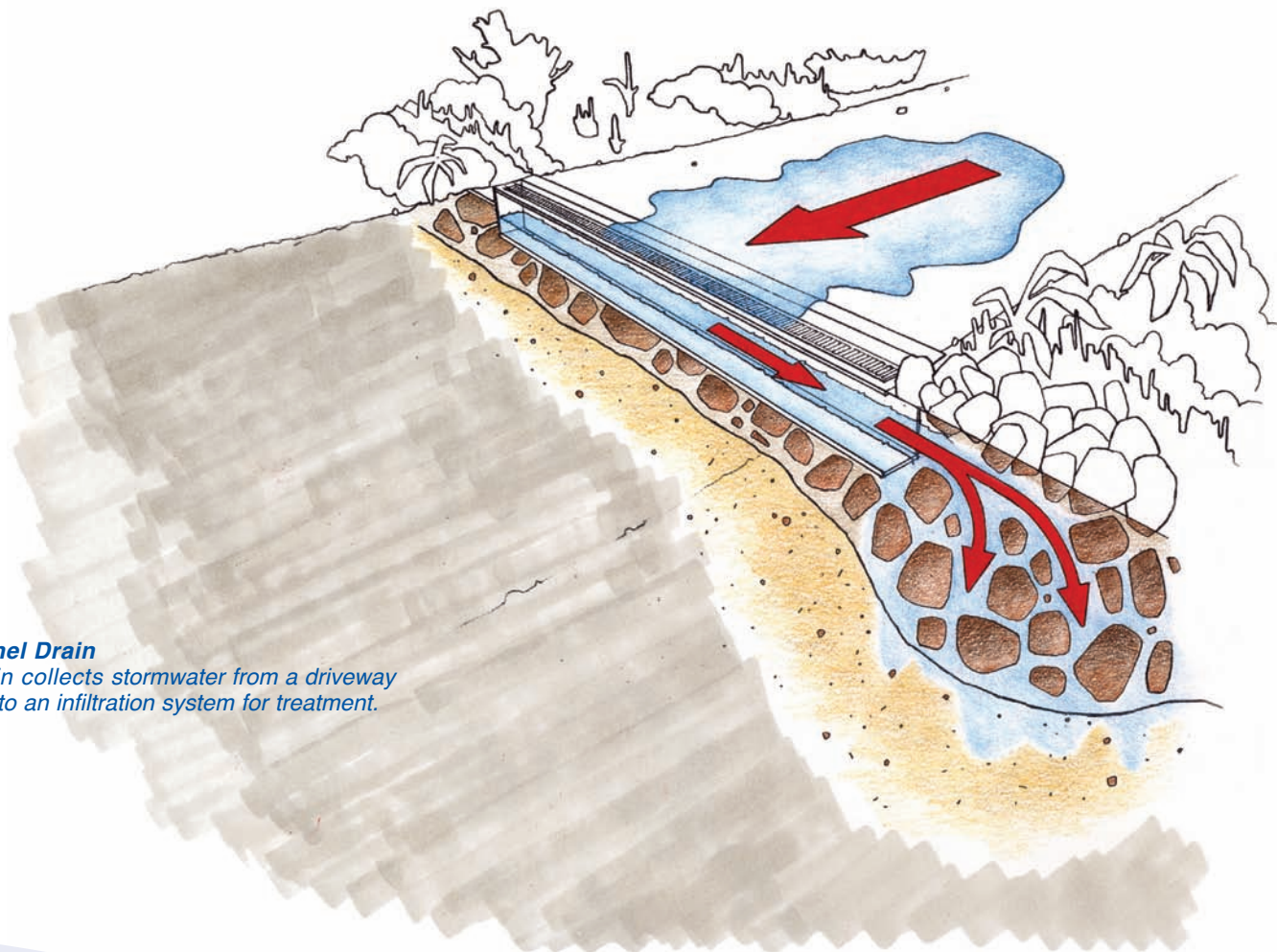


Small Scale Maintenance & Upkeep

Removing soil and debris prevents it from entering surface waters.

Slotted Channel Drain

A channel drain collects stormwater from a driveway and conveys it to an infiltration system for treatment.

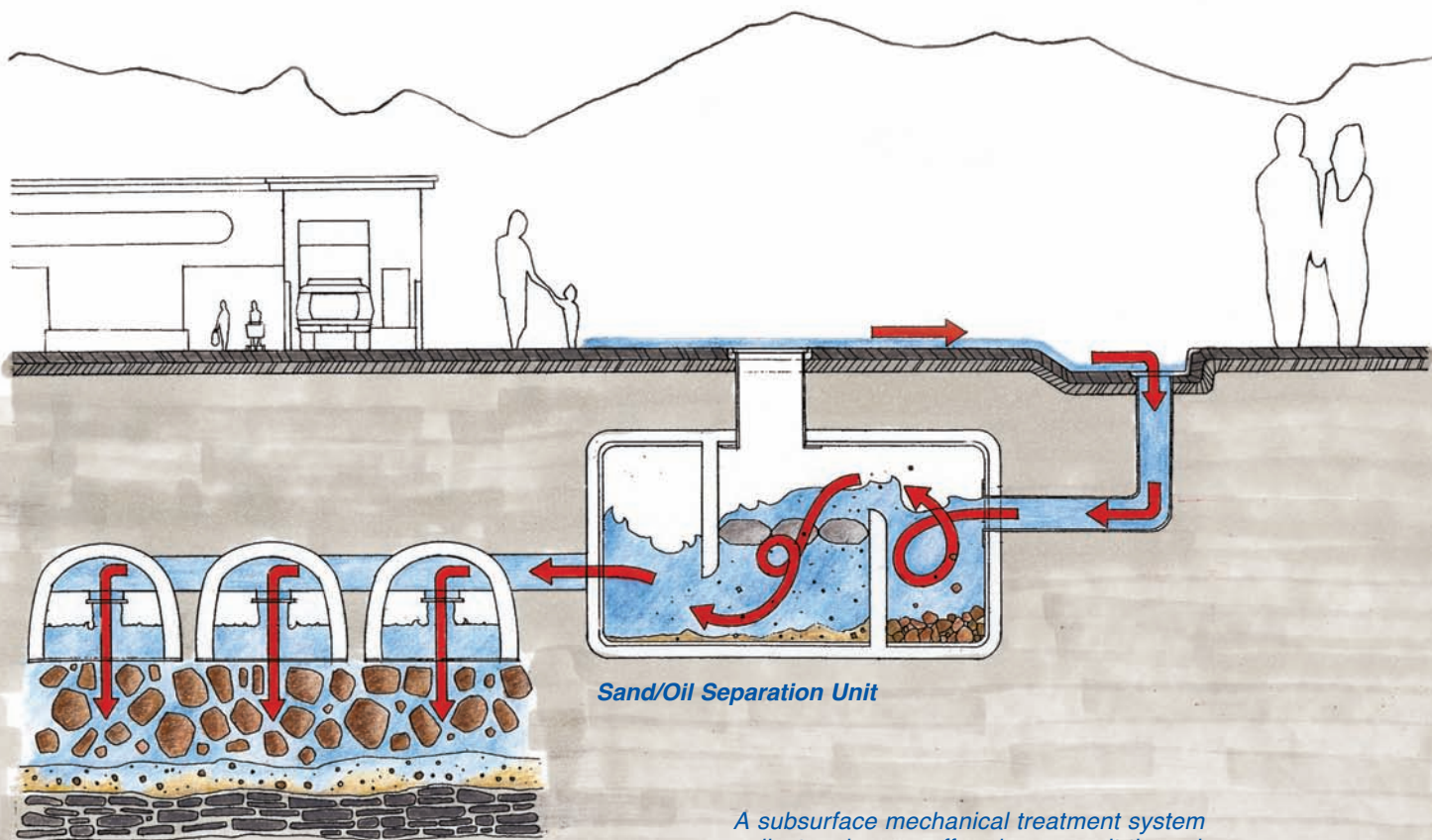


#2. Reduce the Amount of Stormwater Runoff Created:

- Remove unneeded pavement and restore the area for infiltration
- Plant native vegetation on all disturbed bare areas

#3. Capture, Treat, and Infiltrate Stormwater Onsite By Installing a Combination of the Following Practices:

- Detention basins
- Drop inlets or grates
- Oil absorption pillows
- Slotted channel drains
- Sand/oil separation units
- Subsurface infiltration systems



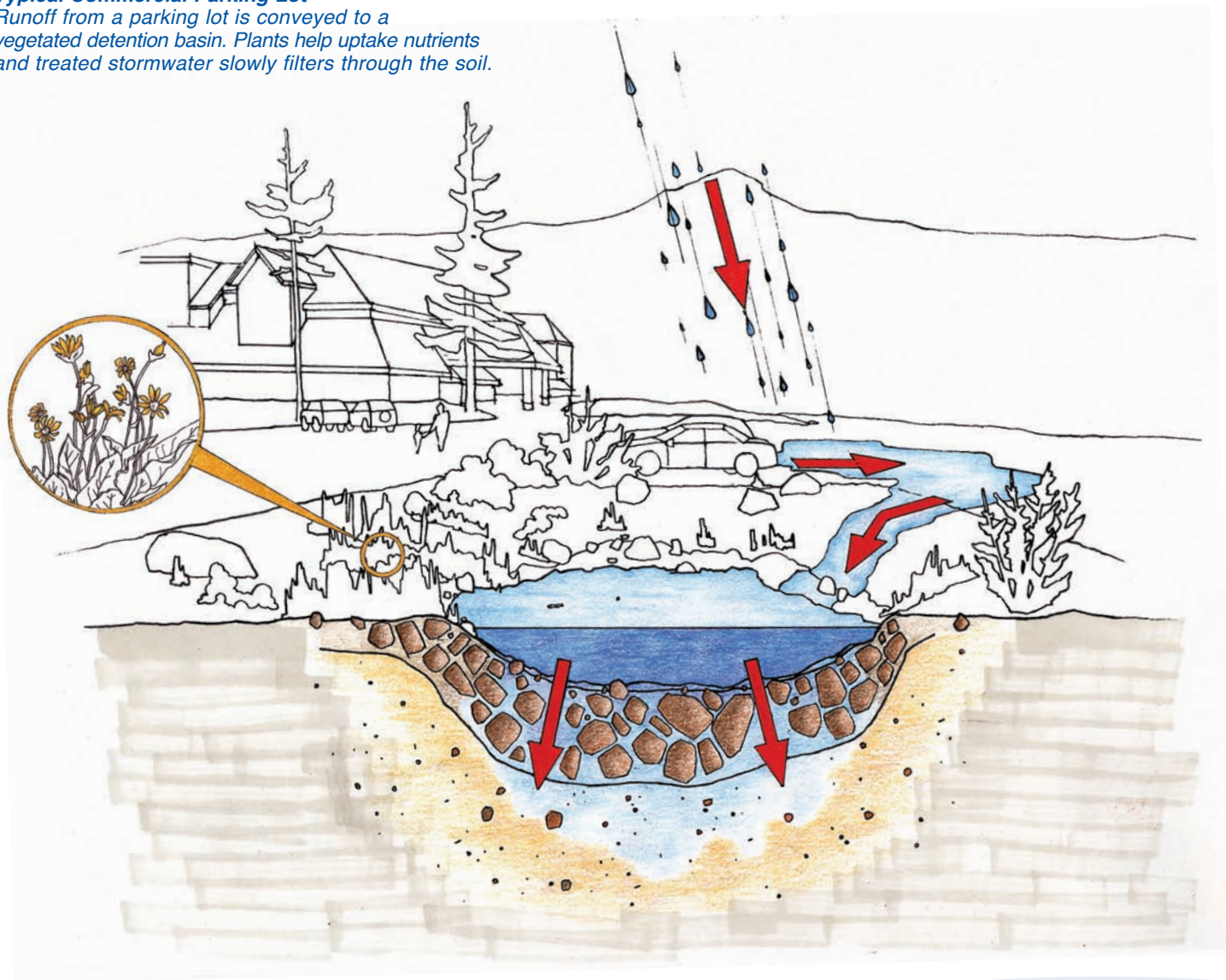
Subsurface Infiltration Gallery

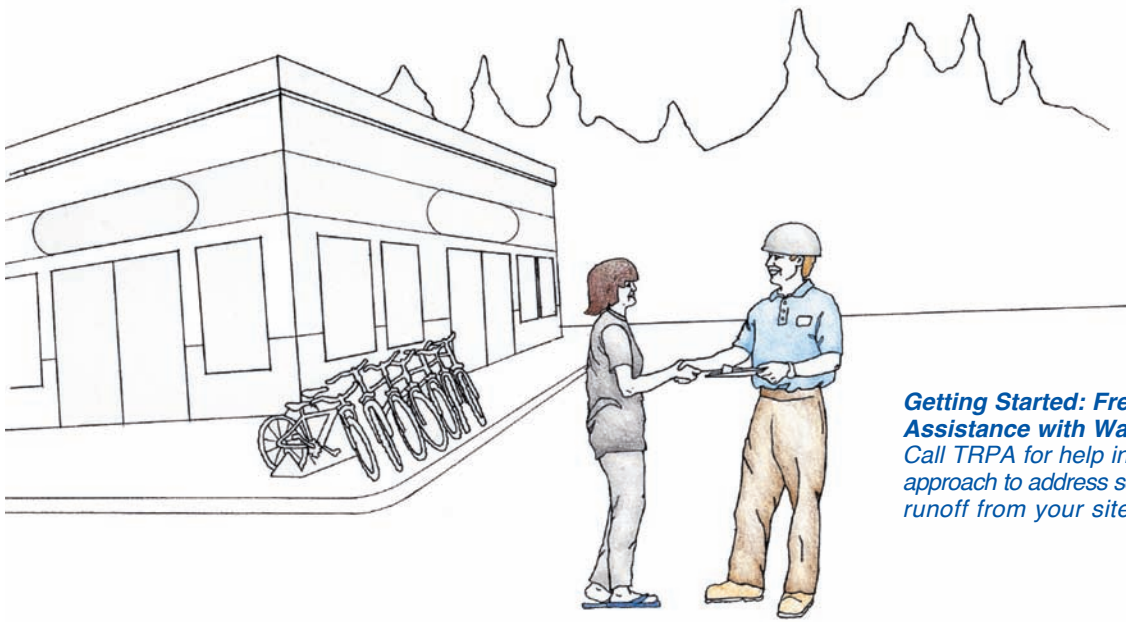
Sand/Oil Separation Unit

A subsurface mechanical treatment system collects urban runoff and conveys it through a sand/oil separator to remove pollutants prior to discharging to an infiltration gallery for final treatment..

Typical Commercial Parking Lot

Runoff from a parking lot is conveyed to a vegetated detention basin. Plants help uptake nutrients and treated stormwater slowly filters through the soil.





Getting Started: Free Technical Assistance with Water Quality BMP Design
Call TRPA for help in determining the most effective approach to address soil erosion and stormwater runoff from your site.

steps to follow to install bmps

In order to bring your commercial or industrial property into compliance with regional BMP requirements, follow the steps below. Should you have difficulty during any point in the process, contact TRPA for assistance.

Step 1: BMP Site Evaluation

Contact TRPA at **(775) 588-4547 ext. 202**, or find us online at **tahoebmp.org**. TRPA staff are available to help you determine BMP needs for your property.

Step 2: BMP Implementation

Depending on site constraints and complexity, you may be able to install BMPs yourself, or you may need to hire a licensed contractor to do the work.

Step 3: Certificate of Completion

When BMPs are completed, contact TRPA at **(775) 588-4547 ext. 202**. You will receive a Certificate of Completion for correctly installing your BMPs.



lake-friendly business recognition program

To encourage local business owners to install BMPs and help protect Lake Tahoe, TRPA has initiated a Lake-Friendly Business Recognition Program.

Local businesses that adhere to a set of Lake-Friendly guidelines will be recognized with a window decal, and a listing in "Lake-Friendly Businesses of Lake Tahoe," a publication distributed by TRPA.

for more information contact:

Tahoe Regional Planning Agency

128 Market Street

Stateline, NV 89449

(775) 588-4547 ext. 202

tahoebmp.org

trpa.org

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TAHOE
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